Richard L. Lanigan
Semiotic Confusion in the Phenomenology of Perception

West Meets East, One Actuality Becomes Two Realities

Abstract: The communication analysis presented in the article compares the semiotic coding of visual perception in cultural theory and practice. The USA is used as an example of Western Culturology (egocentric, isometric) compared to the PRC as an example of Eastern Culturology (sociocentric, axonometric). Perception is explicated within the general context of Discourse Expression (rhetoric, aesthetics) and illustrated using examples from the visual arts, notably painting, a television image, and flower arrangement. Because contemporary popular media image production emerged from Japan, Chinese and Japanese art examples are also considered. The primary purpose of the general analysis is pedagogical, to teach semiotic phenomenological methodology in communicological and culturological research.

Keywords: communicology; culturology; discourse; rhetoric; semiotics

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1 Perception in cultures

Communicological culturology is the study of the formations of personal practice (*habitus*) and the resulting value transformations in society (*hexis*), i.e. *autocommunication* (Bourdieu 1972, Lotman 1990). This is to say plainly, we are born into a family whose language and behavior both record the value assumptions of their ancestors and teach these assumptions as governing norms for judging the speech communication of others (secondary modeling as deutero-learning). In short, we assume people mean what they say, no matter how imperfectly they say or gesture it. Most children learn that language signification can be manipulated to desired speech formations of meaning. In semiotic terms, this is to say that the language behavior system of signification (*messages*) can be controlled by the speech and gesture system of meaning

(*codes*). All of this is the semiotic study of the phenomenology of *Discourse,* the main focus of the human sciences of Communicology and Culturology.

We shall not spend much time on this human science history (Lanigan 1984, 1992), other than to refer to Table 1, which summaries the Western (Aristotelian) tradition of *Discourse,* which is to say the *semiotic arts* of Ethics and Aesthetics (the personal), and, Politics and Rhetorics (the public). The table summarizes the study of all values (axiology) from the perspective of the axis, the judgment point at which a value formation (speech act) with social consequence (meaning) takes place in symbolic behavior (signification).

The primary concern with Table 1 is the relationship transformations that connect the view that each of us has of Other people (Ethics) with the view that we have of natural and cultural Objects (Aesthetics). From the vantage of actuality (the empirical world), we are concerned with **what** other people **say** they perceive (Rhetoric) and **how** they account for the **things** they say (Politics) as **ideas** (the eidetic world). You can see why philosophers want us to be careful of rhetoricians when things become words, only to become symbols counted as *new* things! In other words, what counts as Nature and what constitutes Culture

Table 1: Discourse axiology

Axiology (Values) (Philosophy Subdiscipline)	Stases (Greek) (State-of-Affairs) **(Phenomenology Method)**	Questions (Arguments) **SEMIOTIC ORDER;** followed by USA Cultural Preference in (RANK ORDER)	Tests of Evidence: (DISCOURSE METHODOLOGY)
Individual (Egocentric):			
1. Ethics (Personal) Judgments about the **Other**(s). *Consciousness* = a sense of **social norms, harmony.** [**Morality** = Judgments about your **Self.** *Consciousness* = a sense of **conscience.**]	**1. Fact** WHAT happened? **(Description)**	**1. Fact** (Private) (1) Empirical Verification (*noema*) (2) Usually requires group discussion if facts are verifiable. ☞ *Argument by SIGN* (RANK 2)	**1. Fact** *(Data)* Is the **evidence:** (1) Directly observable? (2) Authoritatively reported? (3) Statistically acceptable? (4) Logically acceptable?
2. Aesthetics (Objects) Judgments about **Objects** and **Events.** *Consciousness* = a sense of **cultural taste, beauty.**	**2. Definition** HOW did it happen? **(Reduction)**	**2. Value** (Private) (1) Deals with Quality such as "worth," "good," "benefits". (2) Eidetic Verification (*noesis*) (verifiable by experience). ☞ *Argument by AUTHORITY* (RANK 1)	**2. Opinion** *(Capta)* Is the **evidence:** (1) Authoritative? (2) Objective? (3) Recent? (4) Consistent? (5) *Sufficient* Condition?
Group (Sociocentric):			
3. Politics (Public) Judgments about *both* the **Self** *and* **Other**(s). *Consciousness* = a sense of **cultural mores/customs.**	**3. Value** (Norm) WHY did it happen? **(Reduction)**	**3. Policy** (Public) (1) Almost always uses "should" or equivalent word in question. (2) Advocates a change from the status quo. ☞ *Argument by EXAMPLE* (RANK 3)	**3. Statistic** *(Acta)* Is the **evidence:** (1) Acceptable *Operational* Definition? (2) Replicable? (3) Objectively reported?
4. Rhetoric (Discourse) Judgments about *both* Language **signification** *and* Speech **meaning.** *Consciousness* = a sense of **Intentionality.**	**4. Venue** WHERE does it matter? **(Interpretation)**	**4. Venue** (Public) (1) Where will it happen? (2) Who will be the judge? ☞ *Argument by CAUSE* (RANK 4)	**4. Logic** *(Acta)* Is the **evidence:** (1) Acceptable *Necessary* Condition? (2) Replicable? (3) Objectively reported?

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are easily confused, especially when *perception* involves the *expression* of value judgments about the good and the beautiful, and the harmony of their appreciation in practice.

My purpose in this paper is to take up the problematical conjunction of Culturology and Communicology, i.e. the *problematic of perception as expression* (Arnheim 1969: 232). Both empirical actuality and eidetic reality join to form what we call "cultural preference", the desired way of seeing the world (*in communis:* community by discourse) and how to talk about it (*in proprium:* socially appropriate discourse). Our immediate focus is the situation, for example, in which a person must cope with speaking two languages representing two conscious ways of *symbolizing* actual experience (Lanigan 2012). As Whorf and Sapir suggested long ago, the choice of a language is necessarily the choice of a cultural perspective and all the normative rules that are thereby entailed as a behavioral logic (Sapir 1931, Whorf 1952). When cross-cultural experience brings one culture into contact with another culture, a person's *one actuality* (empirical) suddenly confronts at least *two reality* constructs (eidetic). Part of being bilingual, then, is the challenge of thinking in two languages, which is to say, *seeing two realities* for what is *actually* there! As Merleau-Ponty suggests: "To perceive is to render oneself present to something through the body. All the while the thing keeps its place within the horizon of the world, and the structurization consists in putting each detail in the perceptual horizons which belong to it" (1964: 42).

2 Two views of actuality: West reality and East reality

Perception is a cultural construct in which the actual world (empirical) is perceived as the real world (eidetic). When cross-cultural experiences bring one culture into contact with another culture, a person's actuality suddenly confronts at least two semiotic reality constructs (Jia 2000; Kim 2002; Lanigan 2012, 2015a,b,c; Nisbett 2003). Part of being bilingual, then, is the challenge of thinking in *binary analogues* choices where *comparisons* (both/and conjunctions) precede *contrasts* (either/or disjunctions) constituting contexts of judgment. Only then, does one's bilingual ability become bicultural as communicological competence.

My analysis explores two cultural dimensions of human perception as a function of Communicology: (1) the *visual distinction* between "homogeneous Euclidean scientific space" and "nonhomogeneous non-Euclidian physiological

space" [Heelan 1983: 46], and (2) the *logic* of the visual distinction between the "isometric perspective" of the West (horizontal horizon; foreground down) and the "axonometric perspective" of the East (diagonal horizon; foreground up). Isometric Perspective requires the metaphysics of *phenomenalism* wherein Width (Horizontal) + Height (Vertical) = Depth (Diagonal) and is the cultural perspective of the West. Axonometric Perspective utilizes the metaphysics of *phenomenology* in which Depth (Diagonal) = Height (Vertical) + Width (Horizontal) and is the cultural perspective of the East. All cultures have *both* perspectives before they historically constitute only one view as a *preference* for what is both good and beautiful.
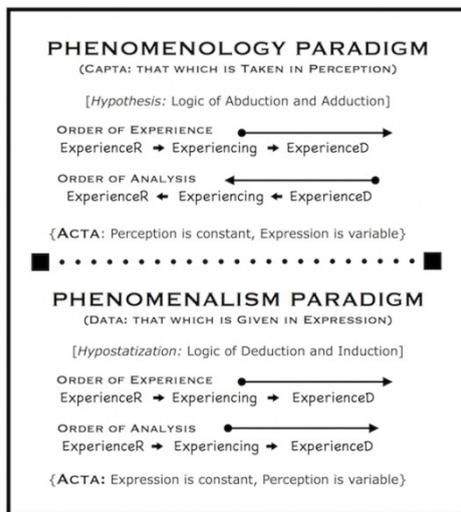
Figure 1: Methodology models of research

In short (Figure 1), Western logic (order of analysis *matches* order of experience) demands that perspective in which the "horizon" is the "line" marking Width. Eastern logic (order of experience *reverses* order of experience) requires a perspective in which the "horizon" is the "line" marking Depth ["Heaven is High, and the Emperor is Far Away!]. The West is digital (Either/Or) and reductive ["You see or you do not" = actuality is either reality or illusion]. The East is analogue (Both/And) and expansive ["There is always an option" = there are always choices: my Reality, your Reality, and our Reality, their Reality, etc. all combining into Actuality].

The issues related to the cultural perception of actuality (empirical) will be viewed from a Western (American, European) dominant *egocentric* perspective

on reality (eidetic) in comparison to an Eastern (Chinese, Japanese) dominant *sociocentric* perspective on reality (eidetic). For convenience, I shall respectively refer to *W-reality* and *E-reality* in the following analysis. Remember, the dominant perspective is a preference only over the then subordinate perspective in the same culture. So, "West" and "East" are a conceptual convenience for *marking preference tendencies*, not defining individual behavior. Following the lead of a definitive account of the culture problematic by Francis L. K. Hsu (1953: 17), *art* will be the *thing* we examine to understand how *actuality* is symbolized by *discursive reality*. This quest is inherently rhetorical inasmuch as art (aesthetics) serves the individual (ethics) and social (politics) purpose of *cultural narrative* (rhetorics). "We respond to those semiotic choices because we share the artist's code" (O'Toole 1994: 151).

I begin simply with a layperson's take on visual perception (Husserl's "natural attitude"). In the West, we are accustomed to a Geometric Linear Perspective based in occidental (alphabetic symbol code) discourse expressed by an *individual* (egocentric) [L. *occidere:* the sun falls, sets in the West; perspective *converges on a horizon* point in space; *terminus ad quem* = terminal vanishing point]. Recall here, the isometric perspective of the West (horizontal horizon; foreground down) requires the metaphysics of phenomenalism wherein Width (Horizontal) + Height (Vertical) = Depth (Diagonal) and is the "correct" cultural perspective or W-reality.

By comparison in the East, Axonometric Curvilinear Perspective is grounded in oriental (character symbol code) discourse expressed by a *group* (sociocentric) [L. *oriri:* the sun stands, rises in the East; perspective *emerges from a horizon* point in space; *terminus a quo* = point of origin]. Here, people are accustomed to the axonometric perspective of the East (diagonal horizon; foreground up) that utilizes the metaphysics of phenomenology in which Depth (Diagonal) = Height (Vertical) + Width (Horizontal). Visual examples are easier to grasp; see Figures 2 and 3. Please note that symbolic diagrams often abstract away *from* actual perception such that the perceptual problematic is inappropriately replaced as a thematic: exemplified in the line drawings, rather than experienced as embodied eye movements

When an actual cultural object is involved in perception (e.g. the Sun), the problematic and thematic are *not clear without cultural rules* in place. For example the brown wood "table" sculpture in Figure 3 was an item in the Shanghai Exhibit (18 August 2008) of Dutch artist Maarten Baas. The Western Perspective is a fully formed solid object ("table") *melting* into liquid [cultural concept of movement: ***down***; setting Sun as Foreground]. By comparison, the

Eastern Perspective is a liquid emerging as a formed solid object ("table") [cultural concept of movement: up; rising sun]. It is critical to recall that the Eastern Perspective (Figure 2) reverses "order of experience" (e.g. the rising Sun as Foreground) and "order of analysis", e.g. the direction of the arrow down, i.e., the rising Sun is a foreground object suggesting expression to a human observer who is perceiving from a background at point ❶. The diagram arrows in Figure 2 are the movement of expression from a foreground point ◉ of perception, often symbolized by a human eyeball.
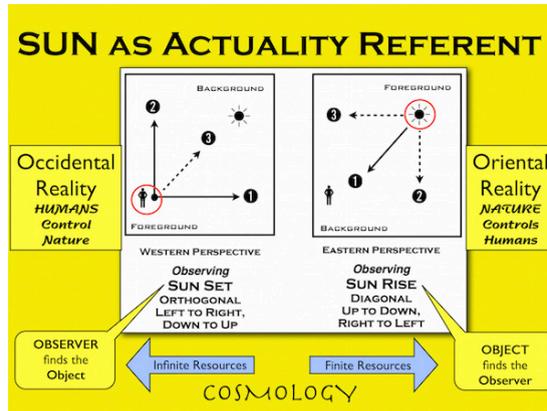
Figure 2: West and East perception construction (One Actuality, Two Realities)
Solid arrows = line-of-sight; dashed arrows = depth construction
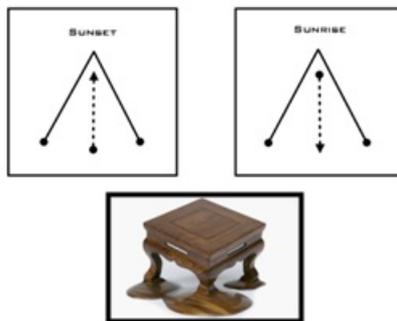
Figure 3: Sun as actuality referent (Western sunset, Eastern sunrise)

The influence of W-reality (horizon *lines*) and E-reality (horizon *points*) can be illustrated (see Figure 4) with the cultural *icons* of typical national flags containing the essential code of perception.

Figure 4: W-reality converges to a horizon line (USA, Poland) and E-reality emerges from a horizon point (PR China, Japan)

Heelan (1983) reminds us that Euclidean geometry requires rather precise measurement for the construction of the W-reality as illustrated in Figure 5. Unfortunately, the mathematical construction is just a reality image projection, not an actual object, much less an object perceived by a human being. Also note that Figure 5 is *one dimensional,* although it hints at two dimensions and our mind might even supply the third dimension (diagonal) because of our cultural code training for specific closure *gestalts*. Heelan (1983: 61–62) provides a clear discussion and illustration of how Euclidean space projects its horizon (background) as a distant "point" (line) for the observer, which seems counterintuitive to the layperson. This is to say, Westerners tend to forget their own body is the horizon of *expression*.
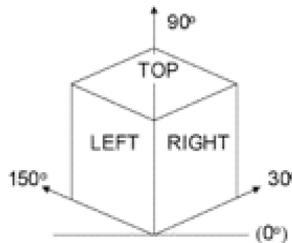

Figure 5: Euclidean "cube" showing phenomenal realism in W-reality

But now, we begin to have a W-reality complication, as Heelan (1983: 46) notes:

> The necessary and a priori character of our Euclidean perception and visual imagination was challenged in the last century by the experimental work of H. Von Helmholtz, F. Hillebrand, and W. Blumenfeld. It was demonstrated that, when normal observers are presented with a configuration of points of light dispersed in an otherwise dark background, they tend to construe the spatial organization of the configuration in a way not consistent with Euclidean geometry. Ernst Mach, and after him Merleau-Ponty and others, also noted that differences between the homogenous Euclidean character of

scientific space and the nonhomogeneous non-Euclidean character of visual space –what Mach called "physiological space" or the space of our sensation – but neither Mach nor Merleau-Ponty investigated the systematic structure of size, depth, and distance relationship in this space, which is best done by means of a metric model.

Fortunately the *systematic* structure and *systemic* representation of a metric model was investigated extensively by Don Ihde (1977) using Edmund Husserl's metric of *semiotic phenomenology* (illustrated later in Figure 38). Recall that Husserl's (1900, 1922, 1969) early focus in phenomenology was logic and mathematics. It is an injustice to wonderful scholarship, but I am going to reduce Ihde's analysis of many figures to just three. The purpose is to quickly educate the casual observer about the perceptual complexity in Actuality that is reduced to the semiotic simplicity of *hexis* (eidetic reality) and *habitus* (empirical reality) by the cultural phenomenology of preference in *embodied practice* (Lanigan 2015c).

Let us begin with the Necker Cube inasmuch as virtually every person with a formal education in the world encounters the image of the cube (usually in a Psychology class) as an "optical illusion" or "unstable image". Recall Figure 5 and think about how an artist or engineer would adjust lines to "better" illustrate "three dimensions" on a one-dimensional surface. When you do, you get Figure 6 (Ihde 1977: 100). Husserl calls such a metric adjustment a *phenomenological free variation.*
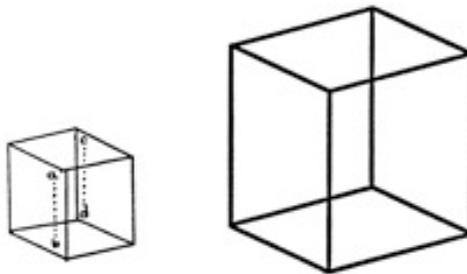

Figure 6: The classic presentation of the Necker Cube

A little visual concentration will soon confuse your brain as it constantly *reverses the gestalt* (culturally perceived as a digital Either/Or choice) in an attempt to stabilize the Euclidean W-reality *horizon* of a "foreground" as between the projection surface "a–b" or surface "c–d". The complexity greatly increases if we change the position of the human observer so that the cube is perceived as in Figure 7. The "reversible" foregrounds ("a–b" and "c–d") are

still there, but less available to cognitive processing because the vertical (height) dimension is *indeterminate* since the horizontal (width) dimension offers no contextual visual clues, i.e., the diagonal (depth) projection is *absent*.
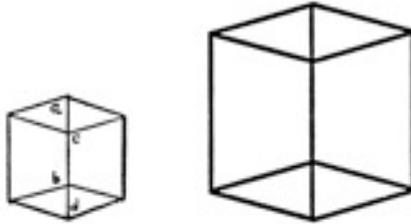

Figure 7: The Necker Cube absent a depth clue about horizon (cf. Figure 6)

Now we are ready to confront the failure of W-reality to cope with "the nonhomogeneous non-Euclidean character of visual space" illustrated in Figure 8 by the third (from the left) image in the cube series we are examining.
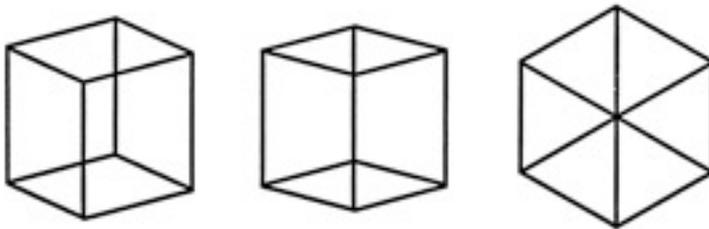

Figure 8: Three possible Necker Cube views of an infinite number of views

As you readily experience, the W-reality of the third image immediately is reduced to one dimension by the *habitus* of the Western brain code training of cultural practice ("pattern recognition"). Incidentally, such an image makes a good test item for determining hemisphere preference in the brain, since a person with "left brain dominance" (scientist) will "see" a one dimensional "star". Recall, *science* is associated with W-reality. Whereas, the person with "right brain dominance" (artist) will still see the Necker Cube with multi-dimensional possibilities. Thus, *art* is associated with E-reality.

3 Image types of technical perspective representation

Does anybody really care about all this? Yes, because you simply cannot make any money in the world without it! The simple, practical, commercial need for people who buy things is to have an easily understandable view of the *object* they want to buy or the *action* they want to try. We shall spend most of our time on the examination of objects, especially the artistic view of objects. However, I first want to offer a brief look at the problem of *embodiment* and the dynamic perception of the *human body* by ourselves and others.

My research colleague at Brock University in Canada, Maureen Connolly, is a leading international expert on *body movement,* the semiotic science of Kinesiology. One of the first things she teaches is how to experience yourself walking, then experience others walking. The complexity of *embodied perception* (the "Necker's Cube" of human movement) comes with much anxiety as she leads students from *walking* to *dancing*. Simply put, *walking* is known in W-reality by the ability to perceive Height (Extension) and then Width (Abduction and Adduction; see Lanigan 1992: 221) as illustrated respectively as images A and B in Figure 9.

To learn to *dance* in W-reality, a person must master the directions of E-reality (Diagonals and Rotations in motion) as depicted in images C and D in Figure 9 (Luttgens and Wells 1989: 151). It is worth noting culturally that in E-reality, the C and D movements tend to be *prior to* the A and B movements, which is best illustrated by the tendency of the Chinese to walk in a zigzag pattern of diagonals as they proceed down a sidewalk. For example, pairs of Chinese women will "dance" this pattern as they walk typically arm in arm. O'Toole (1994: 191) notes that this "dominance of the *semiotic* over the *symbolic*" is exemplified in Chinese culture by the influence of embodied movement where "the Taoist tradition in calligraphy had, ever since the Han Dynasty, stressed the spontaneous engagement of the artist's whole body in the painting of Chinese characters".

Now, let us take up the phenomenological variations of W-reality that are accommodated by the necessity to depict images of objects that suggest the whole object, as opposed to only a one dimensional view. This is the visual world of engineers, the military, the artist, and in the present day, the commercial world of the "game system artist-developer" — the eidetic cartoon world of "Anime" [Japanese アニメ = abbrev. "animation"]. Please note the diagonal and horizontal visual angles of the Japanese characters. To illustrate these "standard" W-reality perspectives, I am using the summary illustrations of

Riemersma (2011), a graphic game programmer, rather than the technical mathematics used in engineering (Roever 1941, Doesschate 1964).
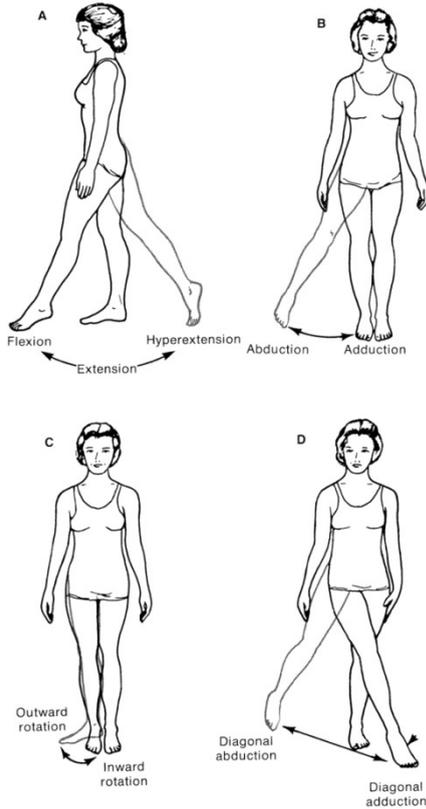

Figure 9: Self perception of movement and visual perception by others

The typical perspectives are for W-reality (Isometric, Military, Dimetric) and E-reality (Axonometric). I shall just briefly note what is characteristic of each perspective. The Isometric or scientific projection (Figure 10) is characterized by equal distance along all axes (width, height, diagonal). The sequence of images depicted (in all figures) is (1) plain view, (2) mathematical measurement, with (3) and (4) as perspective views for placing a camera (focus point) to photograph the image without distortion.
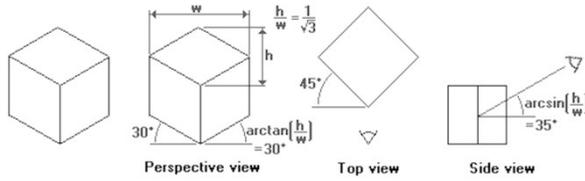
Figure 10: The 30° Isometric Projection

The so-called Military Projection (Figure 11) uses an absolute symmetry of 90° and 45° angles for various problems of accuracy, e.g. computerized range fields of fire for gun barrel angle or missile launch angle for a flying drone.
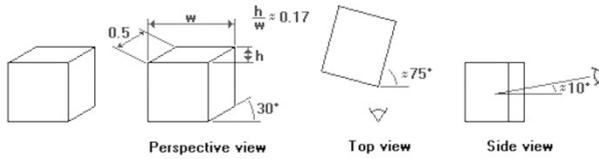

Figure 11: The Military Projection

The principal characteristic of the Dimetric Projection (Figure 12) is that one axis is scaled differently from the other two. It is used in most technical drawing to emphasize a particular step in a sequence or a given part in a whole image. This projection allows for "artistic" creativity by using an "abnormal" dimension to make the object appear "more normal" in depth. Here is where the isometric perspective (eidetic) gives way to axonometric tendency to make the object *size* and the *image* of the object appear to be the "same".
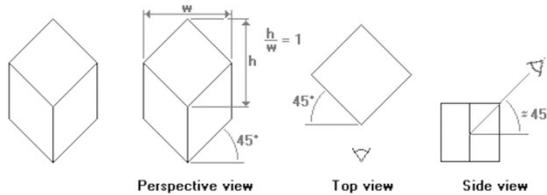

Figure 12: The Dimetric Projection

At this juncture, we must abandon the Riemersma's (2011) account of perspective models because of the *inability* of the criteria of his W-reality to access and depict the Chinese and Japanese form of painting. This is to say,

Riemersma begins to describe Axonometric Perspective as an *aberrant version* of Isometric Perspective! For example, he makes such absurd statements as the "fact" that Asian art has *no* "vanishing point" thus distorts perspective. This Western misunderstanding of Axonometric Perspective (as *failed* Isometric Perspective) is not unique. It can be found in contemporary art history books, e.g. *Asian Art* (Kerrigan 2005: 54).

What will be helpful in the discussion to come is the fact that the "top view" in the Axonometric Perspective (Figure 13) helps us see the defining role of the *diagonal* perspective as an orientation to our "seeing" the object. In point of fact, the universal use of this perspective is the viewpoint that the real estate business always uses in property photographs of "For Sale" buildings showing the front, side and roof of the structure (W-reality use the *visual icon* of E-reality).
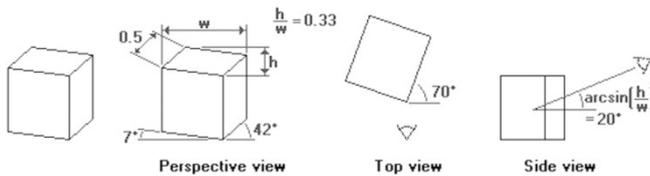

Figure 13: The Axonometric Perspective

4 The metaphysical problem of boundaries

Axonometric Perspective was the solution to a representation problem in Chinese Culture that later spread to Japan. The problem began with *Time* – how to depict time in a visual narrative story on a *scroll*. Unlike the West where Time is measured by Space (look at the "hands" on any clock!), it is the reverse in E-reality. Chinese measure Space by Time (*place* is measured by *activity*). A typical scroll (or wall hanging) varies in Height, but is typically several meters long ("wide" in W-reality). The scroll, like classical Chinese character orthography (calligraphy), is to be viewed (read) from right to left, top to bottom (see Figure 2); modern Chinese is now printed/read left to right. As in most cultures, the lexical inscription (writing) system dictates the cultural preference for vision, hence *deitic words* are the rules of perception! Indeed, Karl Bühler (1934, 1982) demonstrates that language records the anticipatory *visual* preference in a culture (the code conjunction of both space [proxemics] and time [chronemics]). It is a rhetoric function of tropic logic known as *anaphoric deixis*. Thus, rhetoric is a key element in W-reality and E-reality as they are expressed in the

construction of *visual* perception (Arnheim 1969, Berger 1977, Whorf 1952, Guam 2000).

In short, images on scrolls (including wall hangings) must be viewed in E-reality as a series of *diagonal scenes* moving from right-to-left (a narrative from the perception of Now toward Then in the creation of history). The scrolls typically have no depiction of a *light source*, hence no shadows or other (Western) indications of *external* movement. There is no Height (vertical frame dimension) or Width (horizontal frame dimension) inasmuch as these are both *emerging* "vanishing points" as the scroll is unrolled from right-to-left (moving left toward the Then) and rerolled (returning right to the Now) as illustrated:

$$\longleftarrow \quad \textbf{THEN} \ / \ / \ / \ / \ / \ / \ \textbf{NOW} \quad \longleftarrow$$

At this point, I must explain that E-reality sees boundaries differently from W-reality. This is the previously mentioned *boundary* distinction between the *terminus ad quem* (terminal point) and the *terminus a quo* (point of origin). W-reality sees the **double boundaries** as isomorphic, i.e., every visual perception has a start "["and stop"]" digital *finite frame* that contains the Foreground and Background as static and isomorphic. For W-reality, perspective is the perception of a *point in Space,* literally a parenthetical *item* that is enclosed. The unknown Future is to be *located* from the Present, e.g., a calendar has the cultural order rule of (1) Day, (2) Month, and (3) Year. W-reality requires the symmetry of a **double boundary** [1, 2] to enclose the content as a function of *finite Space*, thereby making Time a metaphysical infinite point extended as a *line,* illustrated this way:

$$\textbf{1 [} \longrightarrow \quad \textbf{ORIGIN} \ \text{----------} \ \textbf{TERMINAL} \quad \longrightarrow \textbf{] 2}$$

E-reality, by contrast, demands the axonometric **single boundary** of *finite Time,* thereby making Space a metaphysical finite *point*. Foreground and Background are dynamic and axonometric. E-reality sees the *single boundary* [Husserl's *epoché*] as a mere static moment in the *infinite process* flow of Time. The known Past is to be *lived* from the Present, e.g., a calendar has the cultural order rule of (1) Year, (2) Month, and (3) Day. For E-reality, perspective is the perception of a dynamic analogue boundary *point in* Time as illustrated:

$$\text{-----} \ \textbf{ORIGIN} \quad \longleftarrow \quad \circledcirc \quad \longleftarrow \quad \textbf{TERMINAL} \ \text{-----}$$

A visual example of this E-reality as an *image* can be quite complex in cultural discourse forms (writing, speaking). We need more visual experience before encountering such an example where the semiotic and symbolic are reversible as a hypercode, which we will do at the very end of our analysis (see Figure 41).

5 Art: Exploring the perception of w-reality and e-reality

W-reality constructs the perception of Art along isometric, linear geometrical lines best illustrated in the early visual grid frame apparatuses for "correct" projection on a drawing surface. Two examples are given by Reutersvärd (1983: 9–10) in Figures 14 and 15. Note that an isomorphic, gridded frame makes the "realistic" image quite "scientific" by the methodological use of an isometric measure grid. The technique allows for a one-to-one ratio projection for drawing on paper or canvass. Dürer believed that only assembled parts can make an ideal whole image, i.e., the whole is *preconceived* (Berger 1977: 62).

Figure 16 illustrates an extreme emphasis on framing reality as isometric. Note that the "vanishing point" is open sky meant to locate the *space of infinite time* beyond the horizon line of the mountain.

Figure 14: Albrecht Dürer image of a grid apparatus (1525)

Figure 15: Albrecht Dürer image of a portable grid apparatus

Figure 16: W-reality framing of a vanishing point background

Now, we are ready to transition to the specific analysis of Axonometric Perspective, which grounds E-reality. To begin, we need a side-by-side comparison of one Actuality and the W-reality (isometric) distinction from E-reality (axonometric). Comparative projections were first used in the West in the 15th and 16th Century Italian painting; some comparative examples of church paintings can be found in Scolari (2012: 346–347). In Figure 17, we have a comparison of *rooms* (Krikke 2010) and *furniture* (Dubery and Willats 1972: 29, 30, 79).
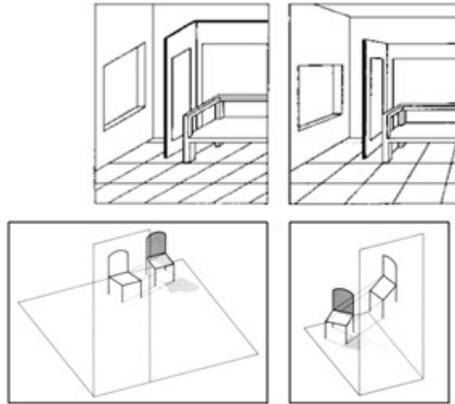
Figure 17: Isometric projections (Left; see Figure 10);
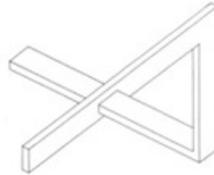Axonometric Projections (Right; see Figure 13)

Figure 18: A so-called optical illusion

The familiarity of Axonometric Perspective allows us to see the "unseeable" in Figure 18. Here, we encounter cultural prejudice where W-reality classifies Figure 18 as an illusion, a non-reality, a metaphysical impossibility! Ironically, W-reality artists are capable of using axonometric perspective in order to prove the impossibility of the perspective! How else could Figure 18 be drawn? Reutersvärd (1983: 10) offers Figure 19 as an example of such bad, incoherent, "impossible" art that does not qualify as culturally serious in any way. After a little experimentation, you will discover W-reality can work anyway. You should begin perceiving in the lower right corner of the image, move left in a circular motion ("clockwise") over to the left side of the frame, then up to the top, cross right and come down to your starting point. Of course, isometric science says this narrative journey is impossible in Space, yet you just did the journey in Time with axonometric science! Actuality (the image) was resolved by you as at

least *two* conscious realities viewed as *one* embodied experience! Hence, the painting is *actual* and can be perceived as such. Note: I did tilt (axonometric) the image in the frame (isometric) to help you *see*.

Figure 19: Axonometric framing

The W-reality and E-reality conflict is now quite clear. What is illusion and not art in the West is the very essence of realistic art in the East of China and Japan. Before showing some explicit examples of Axonometric art, I should like to briefly look at Chinese carpentry because it illustrates in dramatically clear ways how axonometric perspective functions as an activity. One of the better discussions is Ruitebbeek (1992) from which we have Figure 20. Note (viewing right-to-left) that the image is given priority over the writing, Time over Space. Figure 21 shows the "water drop" method for cutting rock.

Figure 20: Page from a Chinese carpenter manual

Figure 21: Painting of carpenters by Lu Ban from the Chiun Qui period

Just as W-reality considers Figure 19 an example of "insanity", E-reality shows "insanity" in Figure 22 by depicting a carpenter who cannot perceive axonometric perceptive in his work. The proof of the cultural judgment is the depicted W-reality *isometric worktable* he constructed compared to the correctly drawn *axonometric head—hands shackle* he is forced to wear by competent carpenters! The correct E-reality representation of a carpenter is Figure 23.

Figure 22: The aberrant carpenter

Figure 23: Lu Ban's good carpenter

Modern examples of applied axonometric woodwork are illustrated in Figure 24 where a room screen follows the tradition of the horizontal "scroll narrative" to depict the action-chain of the four seasons (each vertical panel) of the year with Nature's flowers. Remember that each panel (vertically) stands on an angle ∴∴∴∴∴ so the *diagonal down* line-of-sight is correct.

Figure 24: A Chinese screen depicting the time point of the four seasons

In order to illustrate the intercultural practice of axonometric design with wood, Figure 25 shows a Nigerian wheelbarrow constructed with axonometric frame lines for the lift point of leverage. And as an architectural example, Figure 26 shows an American Navajo (Diné) roof design using axonometric vertical support principles.

Figure 25: Wheelbarrow with intersecting axonometric planes

Figure 26: Roof with axonometric support beams

Even W-reality carpenters will display (advertise) their products with the assistance of axonometric perspective as shown in Figure 27 (cf. Figures 12 and 13). You may want to compare the *chairs* in Figure 27 with those in Figure 17; even the lighting is used to create the correct axonometric shadow – we have E-reality photographic composition excellence! I should note that persons using W-reality codes are often misled to think the object is *bigger* that it is in actuality. This is especially true of house pictures ("view videos" online) used by W-reality real estates sellers.

Figure 27: An isometric table being sold with axonometric image perspectives

6 Axonometric photography and the e-reality of culture's nature

The final part of my analysis is to show that some W-reality cultures can successfully appreciate the aesthetics of E-reality cultures. The following

images are my own photographic images taken (2011) at the National Bonsai [Japan] and Penjing [China] Museum at the National Arboretum in Washington, DC, USA. The museum is divided into three Pavilions: Japanese, Chinese and North American. Let me begin with an E-reality cultural context in Figure 28 showing a typical Japanese art studio illustrating multiple axonometric art forms and media in various stages of production by four artists (calligraphers; see Cheng 1987; Guan 2000). This follows with Figure 29, which is a typical flower arrangement displayed at the Japanese Pavilion and then Figure 30 which is a representative flower arrangement that fits with our previous discussion of carpentry where the *natural* (flowers) is blended with the *cultural* (wood frames).

Figure 28: Japanese artists at work

Figure 29: Flower arrangement and counterpoint shadows

Figure 30: Axonometric flower and wood frame arrangement

Lest we think axonometric principles are resident only in the *arts,* I selected Figure 31 as an illustration of how the E-reality axonometric perspective is taught as *science* in China at the high school level. It represents a pedagogical technique for re-enforcing the pre-existing cultural code preference.

National test set by Chinese education authorities for pre-entry students

As shown in the figure, in square prism $ABCD-A_1B_1C_1D_1$, $AB=AD=2$, $DC=2\sqrt{3}$, $AA_1=\sqrt{3}$ $AD\perp DC$, $AC\perp BD$, and foot of perpendicular is E,

(i) Prove: $BD\perp A_1C$:

(ii) Determine the angle between the two planes A_1BD and BC_1D:

(iii) Determine the angle formed by lines AD and BC_1 which are in different planes.
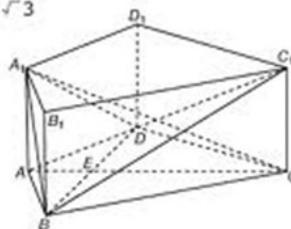
Figure 31: Axonometric geometry

Continuing our museum journey, as one enters the Japanese Pavilion, a gentle transition begins from W-reality suggested by the axonometric Giant Bonsai Tree (8 meters tall) in the entrance area (Figure 32) with apparent isometric frame dimensions in the fence and background wall. This tree survived the

atomic blast at Nagasaki, Japan on 6 August 1945; it is a joint Japanese and American war memorial to those who died. As one continues into the pavilion, the open-air frame structure (no roof) allows *sunlight shadows* (constantly changing during the day as an action-chain) to form the axonometric perspective as we move to the regular (miniature size; 25 cm tall) Bonsai and Penjing trees (more that one hundred are displayed).

Figure 32: Japanese pavilion entrance

An example of the universe of possible trees and shadows appears in Figure 33. The induced confusion (*round* table under *square* base under *round* pot) slowly gives way to the *coherence of light* in Figures 34, 35 and 36.

Figure 33: A universe of axonometric shadows

Figure 34: Axonometric shadows highlight apex up tree cultivation

Figure 35: Tree and shadow counterpoint apex down

Figure 36: Axonometric apex down bonsai tree framed by shadows

Let me close my image analysis by suggesting that the force of cultural perception does not change quickly. I was reminded of this one day when I saw a commercial television advertisement (Figure 37) by a local Chinese-American politician running for office. He wanted to be elected to the United States House of Representatives in Washington, DC. I was struck with two facts: (1) his TV image consultants must have been Chinese since his on-camera image was set with axonometric framing, and, (2) included poor frame counter-balance in the flowers (a sign of indecisiveness!), which suggests an "unnatural" failure in *aesthetic harmony* – the essence of Chinese virtue! I assume Chinese-American E-reality voters would reject him on the sole basis of bad image and W-reality voters would assume this screen image was an unfamiliar news broadcast image from China! For related E-reality analyses of Chinese media, see Lanigan (2009, 2015a, Xie 2014).
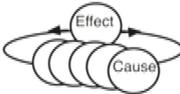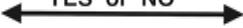

Figure 37: Television Image of a Chinese-American running for the US Congress in 2010

7 Resolving code confusion in culturology and communicology

A resolution to the intercultural problem of semiotic code confusion and communication can be managed by an understanding of the basic rules that guide Western and Eastern cultures (see Table 2).

Table 2: Cultural logic rubrics (Lanigan 2009, 2012)

These rules are rather straight forward and easily summarized:

1. All people live in the ***Actual World of Empirical Experience*** contextualized by a balance between a view of Culture and Nature.

2. **Egocentric** people in **Western (Occidental) Cultures** learn an **Eidetic Model of Reality** in which *Individual Consciousness* (Culture) frames Group Experience (Nature, e.g. sunset).

    The perception horizon frame is GEOMETRIC:

(1) ***Rectilinear*** (straight lines);
(2) ***Orthogonal*** (right angles).

3. **Sociocentric** people in **Eastern (Oriental) Cultures** learn an **Eidetic Model of Reality** in which *Group Experience* (Nature) frames Individual Consciousness (Culture, e.g. sunrise).
    The perception horizon frame is AXONOMETRIC:
        (1) ***Curvilinear*** (curved lines);
        (2) ***Diagonal*** (oblique angles).

4. Each cultural view sees the other culture's eidetic perspective as a specific *failure of perception* in art, and, as a *scientific failure* in the general cultural expression of the *visual*. In all cases, the semiotic code of Ocularics (seeing) precedes the combination of Proxemics (space) and Chronemics (time); all three codes account for the synthetic code of Kinesics (movement). Note that failure of these four codes as a sign-system are often culturally associated with *failures of consciousness*, i.e. mental disorders, leading to the *failure of communication*, i.e. behavioral disorders. This aberrant coding applies in all cultures as *deviance* from the commonly preferred norm.

In conclusion, I should like to offer a brief pedagogical illustration on how to "see" what is often considered to be the best iconic example of an axonometric Japanese painting by the artist Ito Jakuchu from his "Mount Fuji Series". We shall begin with Figure 38 illustrating Edmund Husserl's phenomenological model for visual perception (Ihde 1977: 65), which allows us to understand the constitutive process by which our *conscious of* the image (*intentionality*) develops in perception as experience.
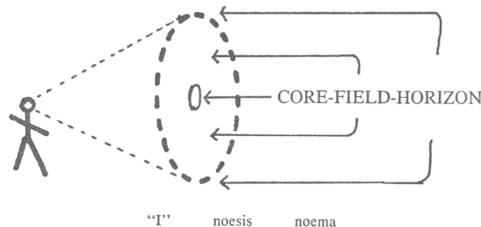

Figure 38: Edmund Husserl's phenomenological model of perception
(from Ihde 1977)

In Figure 39, the binary analogue logic of communicating processes (snow, sea foam) at work links two codes of human perception, Nature (mountains, sea) and Culture (fishing boats). To assist Westerners with the Eastern model of perception, Figure 40 superimposes guidelines for axonometric framing where

diagonals construct *spatial point-of-view* and the *curvilinear* shape (i.e. fishing boats) complete the dynamic line-of-sight *temporal focus* from right to left.

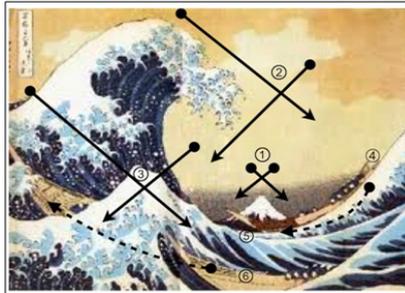**Figure 39:** Ito Jakuchu's In the Well of the Great Wave of Kanagawa

gure 40: Axonometric focus guide

① Core (***foreground*** Mt. Fuji)
② Field (***mid-ground*** sky, cloud)
③ Horizon (***background*** wave)
④ Core (***foreground*** Fishermen's Boat One *moving down*, right-to-left)
⑤ Field (***mid-ground*** Sea Wave *moving down-to-up*, right-to-left)
⑥ Horizon (***background*** Fishermen's Boat Two *moving up*, right-to-left)
Boat One ④ *foreground frames* Mt. Fuji ① (boat image is *holistic,* fully *in* focus), while Boat Two ⑥ *background frames* the Wave (boat image is *partial,* fading *out* of focus).

Westerners will see a focal foregrounded sea wave (see ② in Figure 40) that frames the snow covered Mount Fuji (see ①) in the background. Westerners tend to see only *one* fishing boat (see ⑥); boat ④ is "invisible" as a curvilinear projection) in the "W-foreground" that is framed by the vanishing point "clouds" [the W *field*] (see ②; moving left-to-right, bottom-to-top), which then suggests

Mt. Fuji (see ①) as the "W-background". Also, Westerners tend to mistake ③ as a foreground mountain peak.

By comparison, *Easterners* will tend to first see a focal Mount Fuji (see ① in Figure 40) in the "E-foreground" that is framed [the E *field*] by the temporal vanishing point "sea wave" (see ③; moving right-to-left, top-to-bottom) in the "E-background". Easterners always see *both* fishing boats moving in *temporal harmony* from right (boat ④) to left (boat ⑥). The *spatial* harmony of Mt. Fuji and the Sea (Nature's *field* of both snow and water mist) will be perceived before the *temporal* harmony of the fishing boats, which taken together, are a full curvilinear cycle of movement (Culture). I should note that Jakuchu's painting is also a fine example of Chinese cosmology inasmuch as the Five Elements [Wǔ Xing] of Earth, Water, Wood, Metal and Fire are all represented as the harmony of Culture and Nature (e.g. boats of wood held together by fire forged metal nails on the sea shaped by the mountains).

Last, I should like to take up a previous theoretical comment made at the beginning of Section 4 above. This is to say, Bühler's (1934: 438–448, esp. 446; Guam 2000) concept of *anaphoric deixis* (*anticipatory pointing* that indicates reflexivity, reversibility and reflection) that we have just closely analyzed in the perception of expression in an art image (Figure 39), applies equally well to written discourse and cinematic film images. While Bühler's discourse poetic example is taken from Homer's Odyssey (Book XXI), I want to use an illustration in the form of the contemporary Chinese poem entitled *Autumn, To A Friend* (Figure 41) attributed to Xiao Nan (潇男) posted on various internet blogs (2013-10-22). Guam (2000: 30) summarizes the point: "In the cultural tradition of China, handwriting and painting have never been separated from each other, which further explains the close relationship between Chinese characters and painting".

While the full *conceptual and visual aesthetics* of this *Autumn* poem cannot be fully appreciated in translation, some illustration lines are rendered in English for our analytic purposes. First note that the poem is *rhetorically* presented using *diagonal spatial* formatting and is printed in modern style from left-to-right (although it could easily be printed in classical style right-to-left). As noted in lines 1a and 1b [the digit indicates the number of characters per line; *a* lines are the image of Culture; *b* lines are the image of Nature; *a* and *b* are combined as in a *mirror*], the poem begins where it ends and ends where it begins, a perfect *curvilinear temporal* format of cultural logic (Table 2). Recall the discussion of a *single boundary* as the *point* between *origin* and *terminal* dynamic discussed near the end of Section 4 above. Line 0 in Figure 41 is numbered as 0 because 0 is *both* the beginning and *end* of the number system (1─9), hence the possible cultural realities: (1) W-reality is 9a to 1a; (2) E-reality

is 9b to 1b. Actuality is phenomenologically, therefore, 1a to 1b to 1a where the order of experience *precedes* the order of analysis.

秋，致友人

1a   秋
2a   似酒
3a   味醇厚
4a   岁月悠悠
5a   转身又回首
6a   再抚喜乐哀愁
7a   往事如烟花依旧
8a   唯友谊绵长如水流
9a   只缘一路有你陪着走
0   沐晨曦撷彩霞雨中漫游
9b   待到红叶浓时再聚首
8b   饮酒品茶观菊叙旧
7b   落英满地云舒袖
6b   欢声笑语不休
5b   夕阳挂枝头
4b   红尘看透
3b   别无求
2b   静候
1b   秋

[Autumn, To a Friend]
1a [Autumn]
5a [Turning Around Looking Back]
0 [Bathing in the Sunrise, Basking in the Sunset, Strolling in the Rain]
5b [Sunset's Twilight]
1b [Autumn]

Figure 41: Axonometric inscription of a Chinese poem

The visual image *foreground* (reversible diagonal) of Figure 41 is represented in lines 1a and 1b just like the juxtaposition of the boats versus the waves/mountain in Figure 40. Line 0 is the *background* and functions *vertically* (the horizon) as a *temporal* sign the same way Mt. Fuji does in Figure 40. Also in Line 0, we find the *horizontal* dimension of *space* in which the semantic unit "basking" is mid-*point* between the "bathing" and "strolling", which are the same as the two sides of the iconic frame in Jakuchu's "wave". In Michel Foucault's semiotic phenomenology, "Basking in the Sunset" is the *interstices* point of *ontological existence,* the *zero point in zero* always indicated by the symbol 😊 (Lanigan 1992: 74).

Please note that E-reality measures time by *Activity*, i.e. an action-chain of evens (bi-directional): Bathing ↔ Basking ↔ Strolling. The spatial and temporal narration of 1a—5a—0 is *reversible—reflexive—reflective* in lines 0—5b—1b, the *mirror image* joining possible with the impossible. This series of *characters* doubled over as *painting* exemplifies the logic of "part—whole inter-determination" wherein "It must be recognized that this open series is possible, not because of the approximating nature of understanding itself, but because ontologically there is a mutual conditioning and mutual constituting relationship of whole and part" (Cheng 1987: 31–32). Therefore, the *aesthetic semiotics of extra-coding* (combined undercoding and overcoding at once) is an exhaustive sign-system depicting a simultaneous activity of icon, index and symbol (Eco 1976: 136). Figure 41 is a proof in point of the *combinatory cyclic logic* of E-reality as a semiotic phenomenology of Communicology (see Table 2).

In conclusion, it is necessary to say that the analysis I have completed with Ito Jakuchu's painting *In the Well of the Great Wave of Kanagawa* and Xiao Nan's discourse poem *Autumn, To A Friend* have an exact parallel in Michel Foucault's analysis of the human sciences as a rhetoric in *Les Mots et les Choses* [Words and Things]. He begins his critique of W-reality by taking up *discourse* as the *problematic* of visual rationality illustrated in the painting *Las Meninas* by Velasquez (the front piece in Foucault 1966). Then Foucault, in the *Preface* to his book, turns to the analysis of a *thematic* of visual semiotic phenomenology by considering the *discourse* of a "certain Chinese encyclopedia" described by Borges. The *encyclopedia* list is *expressed* in E-reality as an accurate record of perception, yet the list is *perceived* in W-reality as an inaccurate (incoherent!) *dictionary* list. In short, I am suggesting the E-reality *perception* analysis I present in the present text is *reduplicated* (*reversible—reflexive—reflective*) by the W-reality *expression* analysis by Foucault. Umberto Eco (1984) captures the dynamic of such a discourse hermeneutic with the use of the cultural metaphor of the *encyclopedia* (*rhetoric générale:* analogue logic of discourse perception) and the *dictionary* (*grammar générale:* digital logic of discourse expression). Foucault further argues that the *Encyclopedia* and *Dictionary* are reified in culture as *épistemēs* in the respective *tropic* (oral rhetoric) and *lexical* (inscribed rhetoric) form of the *Museum* and the *Library* (Lanigan 1996). As Eco (1984: 85) confirms, "the encyclopedia is a semantic concept and the dictionary is a pragmatic device" which, following the argument of Hsu (1953), I explicated as the combination of *discourse* (*phenomenology* as encyclopedia in the museum) and *art* (*semiotics* as dictionary in the library). Indeed, we come full circle to the thesis of this analysis: The study of the formations of personal practice (*habitus*) and the resulting value transformations in society (*hexis*), i.e. the

autocommunication of Communicology and Culturology (Bourdieu 1972, Lotman 1990).

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